High-Volume Unit Dose Packaging Machines:

A Special PP&P Buyers’ Guide

Even as patient safety initiatives drive home the need for bar-coded, unit dose medications, locating a consistent supply of these medications continues to be problematic. It is increasingly apparent that health-system pharmacies will need the capability to repack and bar code medications to the unit of use. Selecting a high-volume unit dose packaging machine can provide pharmacies with significant benefits, including increased efficiency and control over bar-coded drug availability.

Before you determine which packaging machine best suits your facility’s needs, it is important to consider a number of factors. First, look for a reliable company that provides state-of-the-art software and strong after-sale service and support programs. Acquisition cost and ongoing operational costs should be carefully weighed in relation to your budget. However, beyond those rather obvious considerations, there are a number of other factors to contemplate when making a purchasing decision.

For example, it is desirable for a unit dose packaging machine to have the capacity to repack a wide variety of different tablets and capsules. Some machines are also able to produce a variety of package sizes. This flexibility can ensure that the medications packaged by the machine are compatible with your point-of-care dispensing systems or centralized automated dispensing machines. Further, using the smallest packaging available may possibly alleviate potential drug storage problems. The speed of the machine is an important consideration relative to the volume of drugs that will require repackaging. In selecting a packaging machine, you should also be sure to note if the labels it uses suit your needs in terms of their size.

Another important matter to take into consideration is the machine’s bar-coding ability. Director of pharmacy for Brigham and Women’s Hospital in Boston, William Churchill, RPh, MS, contends that the use of two-dimensional (data matrix) bar codes has its advantages. Churchill points out that data matrix bar codes can be “up to 30 times smaller than one-dimensional bar codes, and they ensure a higher degree of accuracy when scanned. A data matrix bar code is still readable even if it is up to 60% damaged.” While your pharmacy may use one-dimensional bar codes currently, a machine that can also produce two-dimensional bar codes may be a better buy in the long-term. However, it should also be noted that upgrading to two-dimensional bar coding can be an expensive undertaking. Two-dimensional bar code scanners can be costly, and other systems and equipment throughout the pharmacy and hospital might have to be updated as well. Although a majority of the manufacturers in this space do not currently offer two-dimensional bar code support, several have indicated their future products will offer this capability. It may be worthwhile to investigate which products are on the horizon.

Finally, you must consider the machine’s physical footprint before you make a purchase. You should determine if the machine’s size makes it a proper choice for your pharmacy, where space may be at a premium.

On the pages that follow, PP&P presents a resource designed to help our readers as they examine their product needs in the high-volume unit dose packaging machines marketplace. Containing the detailed information needed to make an educated purchase, the following buyer’s guide lists some of the market’s most innovative products.
AutoMed, from the AmerisourceBergen Technology Group
AutoMed FastPak 330
AutoMed FastPak 520
With 330 and 520 oral solids canisters, respectively, the FastPak 330 and 520 are well suited for health systems with medium to large formularies. AutoMed’s scalable line of FastPak systems can:
• reduce medication costs by as much as seven cents per oral solid dose
• bar code and automate 100% of a health-system pharmacy’s oral solids
• enable pharmacy staff to be redeployed to other clinical activities
• speed the cart-fill, unit-based-cabinet-fill, or nurse-server-replenishment processes
• generate both unit-dose or multi-dose packages
• interface with all pharmacy information and/or management systems

AutoMed FastPak’s easy-to-open unit-dose or multi-dose packaging (USP-Class B) features user-definable text and bar coding. The machine operates quietly, and its splicing technology permits paper changing at any time during its operation, without sequence interruption or order loss.

Cardinal Health
Pyxis Packaging Console SL
Pyxis Packaging Console XL
Capable of holding 71 and 240 unique medications, respectively, Pyxis Packaging Console SL and Pyxis Packaging Console XL provide flexible unit-dose packaging and bar-coding solutions for oral solid medications, and can ultimately improve pharmacy workflow and medication safety.
Bar codes created with Pyxis Packaging Console XL can be used with the Pyxis Medication Administration Module, and both the SL and the XL can be used to refill both Pyxis CUBIE pockets and Pyxis MedStation drawers. The consoles can also generate demand reports to determine true usage and refill needs, and can package medications in patient-specific strips.

Integrated Healthcare Systems, Inc.
OS-PAC
The OS-PAC affordably packages oral solid medications into unit-dose or multi-dose forms for hospitals and long-term care facilities. Packaging is done at the rate of 60 packets per minute and fill requests are automatically sorted for specific patients, nursing units, or unit-based dispensing cabinets.
The OS-PAC can facilitate patient safety improvements by providing easy-to-read packaging with up to 19 lines of customizable text and a barcode to enable bedside scanning and verification. The machine’s extensive inventory reporting capabilities help control costs and decrease on-hand inventory. Available in several models, the OS-PAC can be purchased independently or as part of Integrated’s Barcode to Dose Solution, which addresses patient safety by enabling health systems to attach bar codes to 100% of doses dispensed.

McKesson Automation
PACMED
Available in four models, McKesson Automation’s PACMED high-speed unit dose packager can accelerate the adoption of bedside bar-code scanning. The automated device bar codes, packages, and dispenses solids with minimal operator intervention, and prints 55- and 75-mm packages with up to 19 lines of customizable text.
The packaging technology is scaleable to the needs of a given pharmacy, with available models capable of housing from 80 to 500 unique medications. PACMED’s user-friendly, SQL-based software interfaces easily with pharmacy information systems, and processes orders, manages inventory, controls package design, and produces comprehensive reports.
PACMED packages oral solids for unit-based cabinets or central pharmacy inventory in unit dose or in multi-dose, patient-compliant packages for long-term care providers.

Omnicell, Inc.
SafetyPak
SafetyPak is a fully automated unit dose and multi-dose oral solid medication packaging solution. By labeling medications with bar codes, SafetyPak enables clinicians to scan and verify medications at the point of care, helping to ensure the “five rights” of medication administration—right patient, right drug, right dose, right route, and right time.
SafetyPak helps pharmacies automate the replenishment of decentralized cabinets and the filling of individual patient medication bins, improving the workflow of the central pharmacy and allowing pharmacy staff to spend more time on direct patient care activities.

Available in several models, SafetyPak systems can be configured to meet a wide range of drug formulary requirements and can adapt to multiple distribution models. It can be implemented as a standalone automation solution or it can work in concert with a carousel—like the Omnicell PharmacyCentral automated pharmacy retrieval system—to provide a more comprehensive automated solution.

Swisslog

PillPicker (part of the PillPick Automated Drug Management System)
PillPick is an automated unit dose packaging, storage, and dispensing system that can improve pharmacy productivity and enhance patient safety by enabling bedside medication verification via bar codes. Using the universal bar code 128 and radio frequency identification, PillPick can play a role in bringing the right medication to the right patient.

The PillPick modules automate manual picking, packaging, storage, dispensing, returns, and cart-fill, and two independent robotic arms boost throughput and allow for simultaneous dispensing of first doses and cart fill or packaging. Swisslog’s system can store up to 44,400 unit doses in a compact space, and each unit dose has a unique identifier allowing tracking of every medication according to patient. For items that cannot be packaged by PillPicker due to their size or storage requirements, the system will produce individual bar code labels so that everything in the pharmacy is bar coded.

The CADD-Prizm® PCS II Ambulatory Infusion Pump provides “smart” pump technology in a flexible, easy-to-use medication delivery system

- Programming prompts, alerts, and maximum programming limits
- Medication cassette reservoirs, IV bags, or syringes – compounded or ready-to-fill
- For labor & delivery and post-op, adult and pediatric patients
- Indicated for IV, epidural, intrathecal, and nerve block infusions
- Use as an ambulatory or pole-mounted system

For more information call
1-800-426-2448
or visit us at www.smiths-medical.com

CADD-Prizm is a trademark of the Smiths Medical family of companies. The symbol ™ indicates the trademark is registered in the U.S. Patent Office and certain other countries. ©2005 Smiths Medical family of companies. All rights reserved 3/05

Swisslog’s PillPick Automated Drug Management System, of which PillPicker is a component